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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,895	10/09/2003	George Phillips O'Brien	MIC-35 (P50-0116)	9578
34043	7590	06/24/2004	EXAMINER	
DORITY & MANNING, PA & MICHELIN NORTH AMERICA, INC P O BOX 1449 GREENVILLE, SC 29602-1449			JULES, FRANTZ F	
			ART UNIT	PAPER NUMBER
			3617	

DATE MAILED: 06/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,895

Applicant(s)

O'BRIEN ET AL.

Examiner

Frantz F. Jules

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired.

Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 21 recites the broad recitation of "tread belt separation on a vehicle", and the claim also recites of "a particular make and model" which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Kyrtzos (US 6,072,388).

Claims 1-4

Kyrtzos discloses an apparatus for monitoring the condition of a tire comprising at least one sound monitoring device mountable (24) on a vehicle, the sound monitoring device for producing a sound monitoring device output signal (30) representative of the sound produced by at least one tire of the vehicle during rotation of the tire; a signal processing device (30) comprising a neural network for receiving and processing the sound monitoring device output signal, the signal processing device producing a processing device output signal representative of a potential damage condition of the tire since the tire constitute the main part of the drive line, and an indication device (28) for receiving the processing device output signal and indicating to a user of the vehicle that the tire is experiencing the potential damage condition.

The indication device is selected from the group consisting of a lamp, a light emitting diode, a gage, and an audio indicator as disclosed in col 3, lines 1-4 in accordance with claim 2.

The signal processing device produces the processing device output signal upon comparison of harmonics in the sound monitoring device output signal to known

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harmonics representative of the potential damage condition of the tire as disclosed in col 3 in accordance with claim 3.

The signal processing device produces the processing device output signal upon comparison of an amplitude for each harmonic frequency and a phase angle for each harmonic frequency in the sound monitoring device output signal to known amplitudes for each harmonic frequency and known phase angles for each harmonic frequency representative of the potential damage condition of the tire as disclosed in col 4, lines 3-27 in accordance with claim 4.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kyrtos (US 6,072,388) in view of Magiawala et al (US 6,278,361).

Claims 5-20

Kyrtos teach all the limitations of claims 5-20 except for an apparatus for monitoring the condition of a tire in which the degrees of tread belt separation of the tire is monitored and compared. The general concept of monitoring and comparing the degrees of tread belt separation of a tire is well known in the art as illustrated by Magiawala et al which discloses the teaching of monitoring the degrees of tread wear of a tire and comparing its resonance frequency to at least one stored resonance

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frequency, see col 2, lines 56-67, col 2, lines 1-22. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kyrtos to include the use of monitoring and comparing the degrees of tread belt separation in his advantageous apparatus for monitoring the condition of a tire as taught by Magiawala et al in order to reduce the risk of tire blowout resulting from wear.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure;

Brown et al, Brown, Bonardi et al, and Schofield et al are cited to show related tire monitoring system including visual display indicating the condition of the tire.

Depfenhart is cited to show related sound monitoring device for a vehicle chain including an indicating device to driver.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz F. Jules whose telephone number is (703) 308-8780. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Morano can be reached on (703) 308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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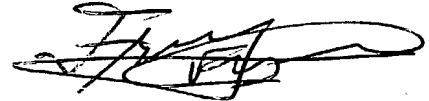
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frantz F. Jules
Primary Examiner
Art Unit 3617

FFJ

June 20, 2004

FRANTZ F. JULES
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Frantz', with a stylized flourish extending from the end.